



[4910-13-P]

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2013-0791; Directorate Identifier 2012-NM-026-AD; Amendment 39-17745; AD 2014-03-08]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Airbus Model A318, A319, A320, and A321 series airplanes. This AD was prompted by a report that an investigation showed that when a certain combination of a target/proximity sensor serial number is installed on a flap interconnecting strut, a “target FAR” signal cannot be detected when it reaches the mechanical end stop of the interconnecting strut. This AD requires an inspection to determine the part number of the interconnecting struts installed on the wings, identifying the part number and the serial number of the associated target and proximity sensor if applicable, and replacing or re-identifying the flap interconnecting strut if applicable. We are issuing this AD to detect and correct a latent failure of the flap down drive disconnection due to an already-failed interconnecting strut sensor, which could result in asymmetric flap panel movement and consequent loss of control of the airplane.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0791>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Airbus, Airworthiness Office – EAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM 116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1405; fax (425) 227-1149.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Model A318, A319, A320, and A321 series airplanes. The NPRM published in the Federal Register on September 25, 2013 (78 FR 58975). The NPRM was prompted by a report that an investigation showed that when a certain combination of a target/proximity sensor serial number is installed on a flap interconnecting strut, a “target FAR” signal cannot be detected when it reaches the mechanical end stop of the interconnecting strut. The NPRM proposed to require an inspection to determine the part number of the interconnecting struts installed on the wings, identifying the part number and the serial number of the associated target and proximity sensor if applicable, and replacing or re-identifying the flap interconnecting strut if applicable. We are issuing this AD to detect and correct a latent failure of the flap down drive disconnection due to an already-failed interconnecting strut sensor, which could result in asymmetric flap panel movement and consequent loss of control of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2012-0012, dated January 23, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

The flap interconnecting strut is a safety device of the High Lift System which acts as an alternative load path from one flap surface to another in case of a flap drive system disconnection. In such a failure case, the installed proximity provide information to the slat flap control computer (SFCC) and the operation of the flap drive system is inhibited.

A recent engineering investigation has shown that, when a certain combination of target/sensor serial number (s/n) is installed on a flap interconnecting strut, a "target FAR" signal cannot be detected when reaching the mechanical end stop of the interconnecting strut.

This condition, if not corrected, could cause a flap down drive disconnection to remain undetected, due to an already-failed interconnecting strut sensor, potentially resulting in asymmetric flap panel movement and consequent loss of control of the aeroplane.

For the reason described above, this [EASA] AD requires the identification and replacement [or re-identifying] of struts that have a certain target/sensor s/n combination installed.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov/#!documentDetail;D=FAA-2013-0791-0002>.

## **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (78 FR 58975, September 25, 2013) or on the determination of the cost to the public.

## Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 58975, September 25, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 58975, September 25, 2013).

## Costs of Compliance

We estimate that this AD affects 755 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection and Re-identification	8 work-hours X \$85 per hour = \$680 per inspection cycle	\$0	\$680	\$513,400

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements:

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	10 work-hours X \$85 per hour = \$850	\$0	\$850

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0791>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

**2014-03-08 Airbus:** Amendment 39-17745. Docket No. FAA-2013-0791; Directorate Identifier 2012-NM-026-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Airbus Model A318-111, -112, -121, and -122 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-111, -211, -212, -214, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes; certificated in any category; all manufacturer serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 27, Flight controls.

**(e) Reason**

This AD was prompted by a report that an investigation showed that when a certain combination of a target/proximity sensor serial number is installed on a flap interconnecting strut, a “target FAR” signal cannot be detected when reaching the mechanical end stop of the interconnecting strut. We are issuing this AD to detect and



correct a latent failure of the flap down drive disconnection due to an already-failed interconnecting strut sensor, which could result in asymmetric flap panel movement and consequent loss of control of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Inspection to Determine the Part Number of the Interconnecting Struts**

Within 8,000 flight hours after the effective date of this AD, inspect to determine the part number of the interconnecting struts installed on both the left-hand (LH) and right-hand (RH) wings of the airplane, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-27-1206, Revision 01, dated October 10, 2011. A review of the airplane maintenance records is acceptable for determining the part number of the installed interconnecting struts, in lieu of the inspection, if the part number of the installed interconnecting struts, and the part number and the serial number of the associated target and proximity sensor, can be conclusively determined from that review.

(1) Airplanes on which Airbus Modification 27956 has been embodied in production, and on which no interconnecting strut has been replaced with a strut having a part number specified in figure 1 to paragraph (g) of this AD since the airplane's first flight: No further work is required by paragraph (g) of this AD.

(2) If, during the inspection required by paragraph (g) of this AD, any interconnecting strut is installed with a part number specified in figure 1 to paragraph (g) of this AD: Within 8,000 flight hours after the effective date of this AD, determine the part number and the serial number of the associated target and proximity sensor.

**Figure 1 to Paragraph (g) of this AD – Interconnecting strut part numbers**

<b>Interconnecting strut part numbers</b>
D5757030500000
D5757030500100
D5757030500200
D5757030500600
D5757030500800
D5757030501000
D5757030501200
D5757032200000

(i) For airplanes having conditions specified in paragraphs (g)(2)(i)(A), (g)(2)(i)(B), (g)(2)(i)(C), and (g)(2)(i)(D) of this AD: Before further flight, replace the interconnecting strut with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-27-1206, Revision 01, dated October 10, 2011. For the purposes of this AD, a serviceable interconnecting strut is a unit which has been determined to be in compliance with the following requirements of this AD:

- (A) A target part number (P/N) ABS0121-13 or P/N 8-536-01; and
- (B) A target serial number lower than 1600, or a target serial number that is unreadable; and
- (C) A proximity sensor having P/N ABS0121-31 or P/N 8-372-04; and
- (D) A proximity sensor having a serial number between C59198 and C59435, or a serial number (S/N) C500000 or higher.

(ii) For a target having S/N 1600 or higher and target P/N ABS0121-13 or P/N 8-536-01: Within 8,000 flight hours after the effective date of this AD, re-identify the interconnecting strut, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-27-1206, Revision 01, dated October 10, 2011.

**(h) Parts Installation Prohibition**

As of the effective date of this AD, no person may install an interconnecting strut with a part number specified in figure 1 to paragraph (g) of this AD, on any airplane, except for parts identified in paragraph (g)(2)(ii) of this AD, provided that the actions in paragraph (g)(2)(ii) are done.

**(i) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-27-1206, dated January 28, 2011, and if additional work has been accomplished using Airbus Service Bulletin A320-27-1206, Revision 01, dated October 10, 2011. Airbus Service Bulletin A320-27-1206, dated January 28, 2011, is not incorporated by reference in this AD.

**(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the

International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1405; fax (425) 227-1149.

Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@faa.gov). Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2012-0012, dated January 23, 2012, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0791-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be viewed at the addresses specified in paragraphs (l)(3) and (l)(4) of this AD.

**(I) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Airbus Service Bulletin A320-27-1206, Revision 01, dated October 10, 2011.

(ii) Reserved.

(3) For service information identified in this AD, contact Airbus, Airworthiness Office – EAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on January 22, 2014.

Jeffrey E. Duven,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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